## AMENDMENTS TO THE CLAIMS

**Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~.**

1 (currently amended): A multi-chamber load-locking device for transferring wafers, said device having an interior divided into (i) an upper chamber and (ii) a lower chamber, and (iii) an intermediate section located between the upper chamber and the lower chamber, which is for loading/unloading wafers,

said device comprising (a) a single divider plate having an upper side and a lower side, both of which are for temporarily supporting wafers, said plate moving reciprocally between an upper position and a lower position, wherein the plate divides and seals the upper chamber from the intermediate section and the lower chamber at the upper position, and the plate divides and seals the lower chamber from the intermediate section and the upper chamber at the lower position, wherein each of the upper chamber and the lower chamber has a sealing surface where the upper chamber and the lower chamber are sealed with the plate, said sealing surface being formed by an O-ring; (b) a cylindrical cam structure co-axially connected to said plate, wherein said plate moves between the first position and the second position by rotation of the cylindrical cam structure; and (c) a rotary actuator for driving and rotating the cylindrical cam structure,

said cam structure comprises (1) a cam cylinder having a cam groove which rotates with the rotary actuator, and (2) a support cylinder having a cam follower which support cylinder is attached to the plate and does not rotate, wherein the cam follower is fitted in the cam groove and moves vertically when the cam groove rotates, said support cylinder being provided inside the cam cylinder, wherein the plate, the cam cylinder, the support cylinder, and the rotary actuator are co-axial,

said groove spiraling around a circumference of the cylinder, said groove comprising (I) an upper horizontal section for locking the plate at the upper position, where the cam follower is securely locked in the cam groove, (II) a lower horizontal section for locking the plate at the lower position where the cam follower is securely locked in the cam groove, (III) a straight middle section for moving the plate at a fixed rate, (IV) an upper transition section connecting the upper horizontal section and the straight middle section for moving the plate at a rate lower than the fixed rate, and (V) a lower transition section connecting the lower horizontal section and

the straight middle section for moving the plate at a rate lower than the fixed rate, wherein the length of each section in a horizontal direction is (I)<(IV)<(III)>(V)>(II),

said device further comprising (d) a vertical beam for supporting the support cylinder, provided in parallel to the axis of the ~~cam~~support cylinder, ~~and~~ (e) a sliding support which ~~is affixed to the support cylinder and~~ slides on the beam, and (f) a linking cylinder which encircles the cam cylinder, is fixed around the cam follower, and is connected to the sliding support, wherein the linking cylinder is linked with the support cylinder and moves along the vertical beam when the support cylinder moves vertically.

2-6 (cancelled)

7 (original): The device as claimed in Claim 1, which is adapted to be disposed between a loading station which places a wafer cassette accommodating semiconductor wafers, and a transfer chamber which conveys the semiconductor wafers, wherein the intermediate section is connected to the transfer chamber, and the upper chamber and the lower chamber are connected to the loading station.

8-11 (cancelled)

12 (previously presented): The device as claimed in Claim 1, wherein the vertical beam is disposed opposite to the cam follower with respect to the axis of the cam cylinder, the support cylinder, and the rotary actuator.

13 (previously presented): The device as claimed in Claim 1, wherein the groove spirals around substantially one circumference of the cylinder.

14 (previously presented): The device as claimed in Claim 1, wherein the cam cylinder and the cam follower are made of indent treated carbon steel.

15 (new): A multi-chamber load-locking device for transferring wafers, comprising:

a chamber for loading/unloading wafers, having an upper sealing surface and a lower sealing surface;

a single divider plate having an upper side and a lower side, both of which are for temporarily supporting wafers, said plate moving reciprocally between the upper sealing surface and the lower sealing surface;

a non-rotatable support cylinder comprising a cam follower, attached to the plate;

a rotatable cam cylinder enclosing the support cylinder, wherein a cam groove is formed in which the cam follower is fitted, and the cam follower moves vertically when the cam groove rotates;

a rotary actuator for driving and rotating the cam cylinder, wherein the plate, the support cylinder, the cam cylinder, and the rotary actuator are co-axially arranged;

a vertical beam for supporting the support cylinder, provided in parallel to the axis of the support cylinder;

a sliding support which slides on the beam, and

a linking cylinder which encircles the cam cylinder, is fixed around the cam follower, and is connected to the sliding support, wherein the linking cylinder is linked with the support cylinder and moves along the vertical beam when the support cylinder moves vertically.

16 (new): The device as claimed in Claim 15, wherein the vertical beam is disposed opposite to the cam follower with respect to the axis of the cam cylinder, the support cylinder, and the rotary actuator.

17 (new): The device as claimed in Claim 15, wherein each sealing surface is formed by an O-ring.

18 (new): A multi-chamber load-locking device for transferring wafers, comprising:

a chamber for loading/unloading wafers, having an upper sealing surface and a lower sealing surface;

a single divider plate having an upper side and a lower side, both of which are for temporarily supporting wafers, said plate moving reciprocally between the upper sealing surface and the lower sealing surface;

a non-rotatable support cylinder comprising a cam follower, attached to the plate, wherein approximately 700-1,300 kg force can be exerted on the support cylinder and the cam follower via the plate when in use;

a rotatable cam cylinder enclosing the support cylinder, wherein a cam groove is formed in which the cam follower is fitted, and the cam follower moves vertically when the cam groove rotates;

a rotary actuator for driving and rotating the cam cylinder;

a vertical beam for supporting the support cylinder, provided in parallel to the axis of the support cylinder;

a sliding support which slides on the beam, and

a linking cylinder which encircles the cam cylinder, is fixed around the cam follower, and is connected to the sliding support, wherein the linking cylinder is linked with the support cylinder and moves along the vertical beam when the support cylinder moves vertically.

19 (new): The device as claimed in Claim 18, wherein the vertical beam is disposed opposite to the cam follower with respect to the axis of the cam cylinder, the support cylinder, and the rotary actuator.

20 (new): The device as claimed in Claim 18, wherein the plate, the support cylinder, the cam cylinder, and the rotary actuator are co-axially arranged.

21 (new): The device as claimed in Claim 18, wherein each sealing surface is formed by an O-ring.